

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A thin film magnetic head comprising:
a read unit, formed above a substrate, having a lower shield, a read element and an upper shield; and
a write unit having a lower pole piece, an upper pole piece, and a coil placed between said lower pole piece and said upper pole piece,
said read unit and said write unit being separated from each other with a non-magnetic material;
wherein at least one of said lower shield and upper shield has a first layer and a second layer formed from magnetic material; and
wherein the coefficient of thermal expansion of said first layer is different from the coefficient of thermal expansion of said second layer.
~~wherein a magnetic material having a low coefficient of thermal expansion of $11.5 \times 10^{-6}/K$ or less is used for forming at least part of the lower shield or the upper shield.~~
2. (currently amended) A thin film magnetic head according to claim 1, wherein said ~~magnetic material having low coefficient of thermal expansion~~ second layer is a crystalline magnetic alloy.
3. (currently amended) A thin film magnetic head according to claim 1, wherein said ~~magnetic material having low coefficient of thermal expansion~~ second layer is a NiFe alloy having a composition comprising 30 to 55 wt% Ni.
4. (canceled)
5. (canceled)

6. (currently amended) A thin film magnetic head according to claim 1, wherein ~~at least one of said lower shield and said upper shield is a laminated film consisting of a layer formed from said magnetic material having low coefficient of thermal expansion and a layer~~ said first layer is formed from a NiFe alloy having a composition mainly comprising 80 wt% Ni, said 80 wt% NiFe alloy layer facing to said read element.

7. (currently amended) A thin film magnetic head according to claim 6, wherein said ~~magnetic material having low coefficient of thermal expansion~~ second layer is a crystalline magnetic alloy.

8. (currently amended) A thin film magnetic head according to claim 6, wherein said ~~magnetic material having low coefficient of thermal expansion~~ second layer is a NiFe alloy having a composition comprising 30 to 55 wt% Ni.

9. (currently amended) A thin film magnetic head according to claim [[6]] 1, wherein a ratio of a thickness of said second layer ~~magnetic material having low coefficient of thermal expansion~~ to a sum of thicknesses of said lower shield and said upper shield is 30% or more.

10. (currently amended) A thin film magnetic head according to claim 9, wherein said ~~magnetic material having low coefficient of thermal expansion~~ second layer is a crystalline magnetic alloy.

11. (currently amended) A thin film magnetic head according to claim 9, wherein said ~~magnetic material having low coefficient of thermal expansion~~ second layer is a NiFe alloy having a composition comprising 30 to 55 wt% Ni.

12. (withdrawn) A thin film magnetic head comprising:
a read unit, formed above a substrate, having a lower shield, a read element,
and an upper shield; and

a write unit having a lower pole piece, an upper pole piece, and a coil placed between said lower pole piece and said upper pole piece,

said read unit and said write unit being separated from each other with a non-magnetic material;

wherein a side shield is provide on each side of said read element, part of said side shield being formed from a magnetic material having a low coefficient of thermal expansion of $11.5 \times 10^{-6}/K$ or less.

13. (currently amended) A disk storage device comprising:

a recording medium;

a drive motor for driving said recording medium;

a magnetic head for reading and writing data from and on said recording medium;

a positioning mechanism for positioning said magnetic head;

a first circuit system for controlling said recording medium, said drive motor, said magnetic head, and said positioning mechanism; and

a second circuit system for supplying a write signal to said magnetic head and processing a read signal from said magnetic head;

wherein said magnetic head comprises:

a read unit, formed above a substrate, having a lower shield, a read element and an upper shield; and

a write unit having a lower pole piece, an upper pole piece, and a coil placed between said lower pole piece and said upper pole piece,

said read unit and said write unit being separated from each other with a non-magnetic material;

wherein at least one of said lower shield and upper shield has a first layer and a second layer formed from magnetic material; and

wherein the coefficient of thermal expansion of said first layer is different from the coefficient of thermal expansion of said second layer.

~~a magnetic material having a low coefficient of thermal expansion of $11.5 \times 10^{-6}/K$ or less used for forming at least part of the lower shield or the upper shield.~~

14. (canceled)

15. (new) A thin film magnetic head according to claim 1, wherein the coefficient of thermal expansion of said second layer is $11.5 \times 10^{-6}/K$ or less.

16. (new) A thin film magnetic head according to claim 1, wherein the coefficient of thermal expansion of said first layer is larger than the coefficient of thermal expansion of said second layer.

17. (new) A thin film magnetic head according to claim 16, wherein said first layer is formed between said second layer and said read element.

18. (new) A thin film magnetic head according to claim 17, wherein said first layer and said second layer are magnetically connected.

19. (new) A disk storage device according to claim 13, wherein the coefficient of thermal expansion of said second layer is $11.5 \times 10^{-6}/K$ or less.

20. (new) A disk storage device according to claim 13, wherein the coefficient of thermal expansion of said first layer is larger than the coefficient of thermal expansion of said second layer.

21. (new) A disk storage device according to claim 20, wherein said first layer is formed between said second layer and said read element.

22. (new) A disk storage device according to claim 21, wherein said first layer and said second layer are magnetically connected.